

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: MOLLY CEPERLEY Examiner # 1059757 Date: 12/27/04
 Art Unit: 1641 Phone Number 572-0813 Serial Number: 10/038,626
 Mail Box and Bldg/Room Location: Rem 3A51 Results Format Preferred (circle) PAPER DISK E-MAIL
 ↳ Rem 3C70

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____
See bibliographic data sheet attached

Earliest Priority Filing Date: 01/08/01

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

① Please search for the compounds shown in claims 8-15. Note the different structures in claims 8, 10, 11 + 14. Prefer linkers shown in claim 9. Prefer dendrimer as PAMAM (polyamidoamine).

Terms: chemiluminesce?
 electrochemiluminesce? (ECL)
 dioxetane
 adamantane
 enzyme-labile
 benzothiazole
 dendrimer
 PAMAM
 dendritic

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STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher:		NA Sequence (#)	STN <u>767.23</u>
Searcher Phone #:		AA Sequence (#)	Dialog
Searcher Location:		Structure (#)	<u>5</u> Questel/Orbit
Date Searcher Picked Up:		Bibliographic	Dr.Link
Date Completed:	<u>1/6/05</u>	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	<u>45</u>	Fulltext	Sequence Systems
Clerical Prep Time:		Patent Family	WWW/Internet
Online Time:	<u>77</u>	Other	Other (specify)

L18 ANSWER(1) OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2002:555736 HCAPLUS
 DOCUMENT NUMBER: 137:106074
 ENTRY DATE: Entered STN: 26 Jul 2002
 TITLE: Dendritic chemiluminescent substrates
 INVENTOR(S): Sparks, Alison L.
 PATENT ASSIGNEE(S): Tropix, Inc., USA
 SOURCE: PCT Int. Appl., 116 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 INT. PATENT CLASSIF.:
 MAIN: G01N
 CLASSIFICATION: 9-14 (Biochemical Methods)
 Section cross-reference(s): 6, 7
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

Considered
02/01/05

This application

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002057745	A2	20020725	WO 2002-US22	20020108
WO 2002057745	A3	20030313		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG			
US 2002155523	A1	20021024	US 2002-38626	20020108
EP 1358344	A2	20031105	EP 2002-713345	20020108
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2004524521	T2	20040812	JP 2002-557779	20020108
PRIORITY APPLN. INFO.:			US 2001-259870P	P 20010108
			US 2001-286383P	P 20010426
			WO 2002-US22	W 20020108

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002057745	ICM	G01N
JP 2004524521	FTERM	2G054/AA02; 2G054/AA06; 2G054/AB04; 2G054/BA02; 2G054/CE03; 2G054/EA01; 2G054/GA09; 4B063/QA01; 4B063/QA18; 4B063/QQ42; 4B063/QQ61; 4B063/QR03; 4B063/QR10; 4B063/QR12; 4B063/QR15; 4B063/QR16; 4B063/QR32; 4B063/QR41; 4B063/QR48; 4B063/QR50; 4B063/QR56; 4B063/QR66; 4B063/QS03; 4B063/QS24; 4B063/QS33; 4B063/QS34; 4B063/QS36; 4B063/QS39; 4B063/QX01; 4J001/DA01; 4J001/DB01; 4J001/DB08; 4J001/DC06; 4J001/DC12; 4J001/DD14; 4J001/DD15; 4J001/EA12; 4J001/EA23; 4J001/EA25; 4J001/FA03; 4J001/GB14; 4J001/GE02; 4J001/GE04; 4J001/GE06; 4J001/JA20; 4J001/JB31; 4J043/PA13; 4J043/PB08; 4J043/QB06; 4J043/QB07; 4J043/RA05; 4J043/SA06;

4J043/SA62; 4J043/SB01; 4J043/TA11; 4J043/TA12;
4J043/TA53; 4J043/TA54; 4J043/TB01; 4J043/UB011;
4J043/UB221; 4J043/UB241; 4J043/YB08; 4J043/YB17;
4J043/YB21; 4J043/YB37; 4J043/ZA60; 4J043/ZB60

OTHER SOURCE(S): MARPAT 137:106074

ABSTRACT:

The invention concerns chemiluminescent substrate delivery systems comprising a conjugate a dendrimer and at least one chemiluminescent substrate are provided. The substrate delivery systems can also include a chemiluminescence enhancer. The dendrimer/chemiluminescent substrate conjugates can be used in kits including an enzyme capable of activating the chemiluminescent substrate to produce a per-oxygenated intermediate that decomp. to produce light. The dendrimer/chemiluminescent substrate conjugates can be used in assays to detect the presence of an analyte (e.g., an enzyme, an antibody, an antigen or a nucleic acid) in a sample.

SUPPL. TERM: dendrimer chemiluminescent light substrate conjugate enzyme
INDEX TERM: immunoassay nucleic acid
Sulfonic acids, uses
ROLE: NUU (Other use, unclassified); USES (Uses)
(alkanesulfonic; dendritic chemiluminescent substrates)

INDEX TERM: Sulfonamides
Urethanes
ROLE: NUU (Other use, unclassified); USES (Uses)
(alkyl; dendritic chemiluminescent substrates)

INDEX TERM: Sulfonic acids, uses
ROLE: NUU (Other use, unclassified); USES (Uses)
(arenesulfonic; dendritic chemiluminescent substrates)

INDEX TERM: Oxides (inorganic), uses
Sulfonamides
Urethanes
ROLE: NUU (Other use, unclassified); USES (Uses)
(aryl; dendritic chemiluminescent substrates)

INDEX TERM: Amides, uses
ROLE: NUU (Other use, unclassified); USES (Uses)
(aryl; dendritic chemiluminescent substrates)

INDEX TERM: Bond
(covalent; dendritic chemiluminescent substrates)

INDEX TERM: Chemiluminescent substances
Conjugation (molecular association)
DNA sequence analysis
Immunoassay
Light
Luminescence, bioluminescence
Membranes, nonbiological
Oxidation
Test kits
(dendritic chemiluminescent substrates)

INDEX TERM: Antibodies and Immunoglobulins
Antigens
Nucleic acids
ROLE: ANT (Analyte); ANST (Analytical study)
(dendritic chemiluminescent substrates)

INDEX TERM: Probes (nucleic acid)
ROLE: ANT (Analyte); ARG (Analytical reagent use); PRP
(Properties); ANST (Analytical study); USES (Uses)
(dendritic chemiluminescent substrates)

INDEX TERM: Enzymes, analysis
ROLE: ANT (Analyte); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(dendritic chemiluminescent substrates)

INDEX TERM: DNA
ROLE: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(dendritic chemiluminescent substrates)

INDEX TERM: Dendritic polymers
ROLE: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(dendritic chemiluminescent substrates)

INDEX TERM: Amides, uses
Carboxylic acids, uses
Esters, uses
Quaternary ammonium compounds, uses
ROLE: NUU (Other use, unclassified); USES (Uses)
(dendritic chemiluminescent substrates)

INDEX TERM: Amines, properties
ROLE: PRP (Properties)
(polyamines, nonpolymeric, amido, carboxylic acid, hydroxyl, amino surface group derivs.; dendritic chemiluminescent substrates)

INDEX TERM: Solubilization
(water; dendritic chemiluminescent substrates)

INDEX TERM: 6788-84-7DP, 1,2-Dioxetane, derivs.
113818-92-1DP, reaction with dioxetane
163442-67-9P, Starburst 4th Generation
ROLE: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(dendritic chemiluminescent substrates)

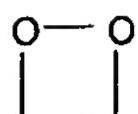
INDEX TERM: 9001-92-7, Protease 9013-05-2, Phosphatase
9013-79-0, Esterase 9031-96-3, Peptidase
9032-92-2, Glycosidase 9035-73-8, Oxidase
14798-03-9D, Ammonium, amino linked
16749-13-6, Phosphonium 18155-21-0,
Sulfonium
ROLE: NUU (Other use, unclassified); USES (Uses)
(dendritic chemiluminescent substrates)

INDEX TERM: 63-74-1D, Sulfonlamide, acridinium derivs.
521-31-3, Luminol 2591-17-5, Luciferin
3682-14-2, Isoluminol 6788-84-7, Dioxetane
22559-71-3, Acridinium 122341-56-4
142849-53-4 443643-96-7
ROLE: PRP (Properties)
(dendritic chemiluminescent substrates)

IT 6788-84-7DP, 1,2-Dioxetane, derivs. 113818-92-1DP,
reaction with dioxetane 163442-67-9P, Starburst 4th Generation
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(dendritic chemiluminescent substrates)

RN 6788-84-7 HCPLUS

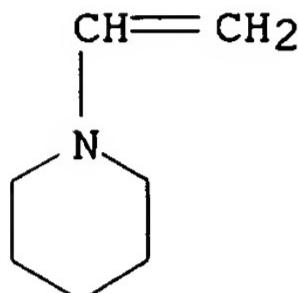
CN 1,2-Dioxetane (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 113818-92-1 HCPLUS
 CN Piperidine, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 15311-58-7
 CMF C7 H13 N



RN 163442-67-9 HCPLUS
 CN Starburst 4th Generation (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9001-92-7, Protease 9013-05-2, Phosphatase
 9013-79-0, Esterase 9031-96-3, Peptidase
 9032-92-2, Glycosidase 9035-73-8, Oxidase
14798-03-9D, Ammonium, amino linked **16749-13-6**,
 Phosphonium **18155-21-0**, Sulfonium
 RL: NUU (Other use, unclassified); USES (Uses)
 (dendritic chemiluminescent substrates)

RN 9001-92-7 HCPLUS
 CN Proteinase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9013-05-2 HCPLUS
 CN Phosphatase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9013-79-0 HCPLUS
 CN Esterase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9031-96-3 HCPLUS
 CN Peptidase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9032-92-2 HCPLUS
 CN Glycosidase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 9035-73-8 HCPLUS
 CN Oxidase (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 14798-03-9 HCPLUS

CN Ammonium (8CI, 9CI) (CA INDEX NAME)

NH_4^+

RN 16749-13-6 HCPLUS

CN Phosphonium (8CI, 9CI) (CA INDEX NAME)

PH_4^+

RN 18155-21-0 HCPLUS

CN Sulfonium (8CI, 9CI) (CA INDEX NAME)

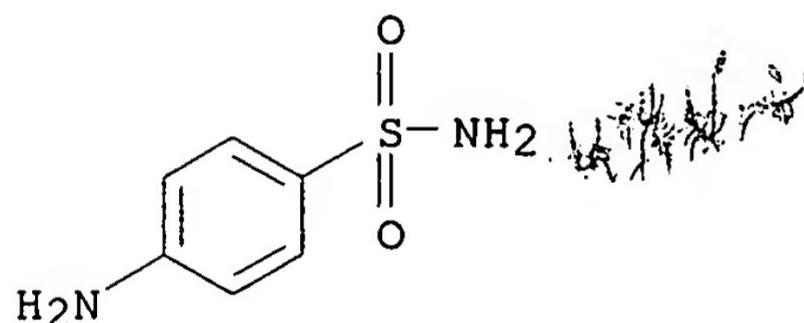
SH_3^+

IT 63-74-1D, Sulfonylamine, acridinium derivs. 521-31-3,
Luminol 2591-17-5, Luciferin 3682-14-2, Isoluminol
6788-84-7, Dioxetane 22559-71-3, Acridinium
122341-56-4 142849-53-4 443643-96-7

RL: PRP (Properties)
(dendritic chemiluminescent substrates)

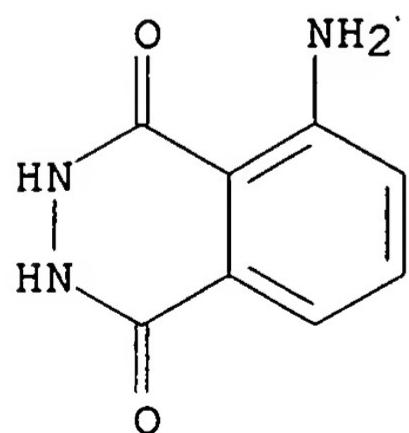
RN 63-74-1 HCPLUS

CN Benzenesulfonamide, 4-amino- (9CI) (CA INDEX NAME)



RN 521-31-3 HCPLUS

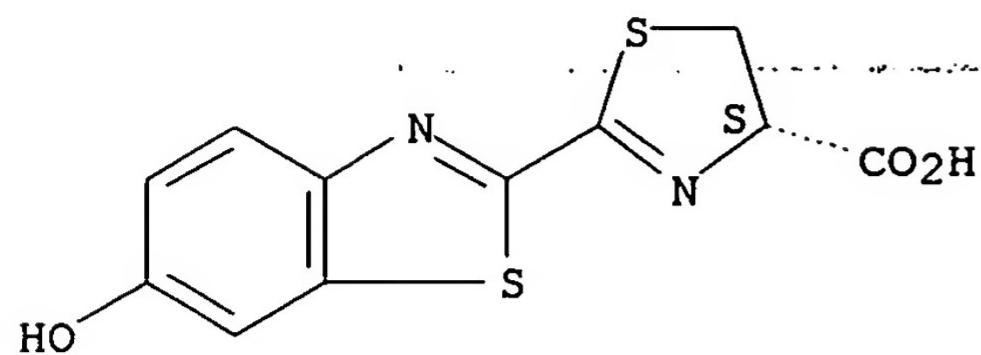
CN 1,4-Phthalazinedione, 5-amino-2,3-dihydro- (6CI, 8CI, 9CI) (CA INDEX NAME)



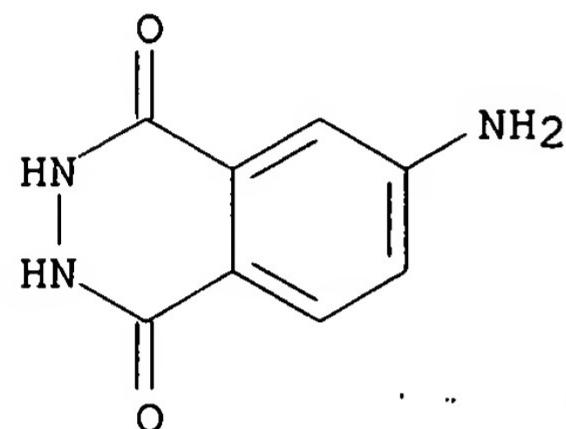
RN 2591-17-5 HCPLUS

CN 4-Thiazolecarboxylic acid, 4,5-dihydro-2-(6-hydroxy-2-benzothiazolyl)-, (4S)- (9CI) (CA INDEX NAME)

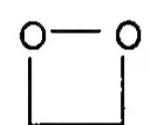
Absolute stereochemistry.



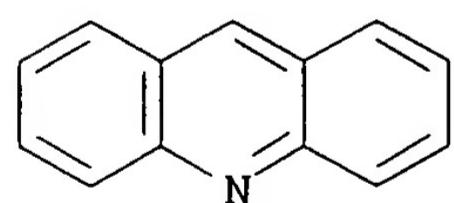
RN 3682-14-2 HCAPLUS
 CN 1,4-Phthalazinedione, 6-amino-2,3-dihydro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



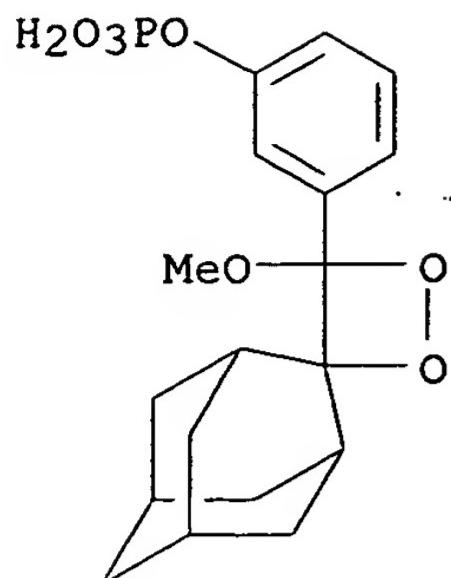
RN 6788-84-7 HCAPLUS
 CN 1,2-Dioxetane (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 22559-71-3 HCAPLUS
 CN Acridine, conjugate acid (8CI, 9CI) (CA INDEX NAME)

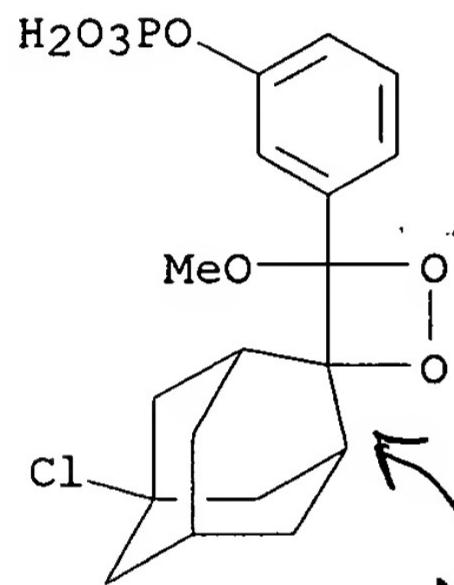


RN 122341-56-4 HCAPLUS
 CN Phenol, 3-(4-methoxyspiro[1,2-dioxetane-3,2'-tricyclo[3.3.1.13,7]decane]-4-yl)-, dihydrogen phosphate (9CI) (CA INDEX NAME)



RN 142849-53-4 HCPLUS

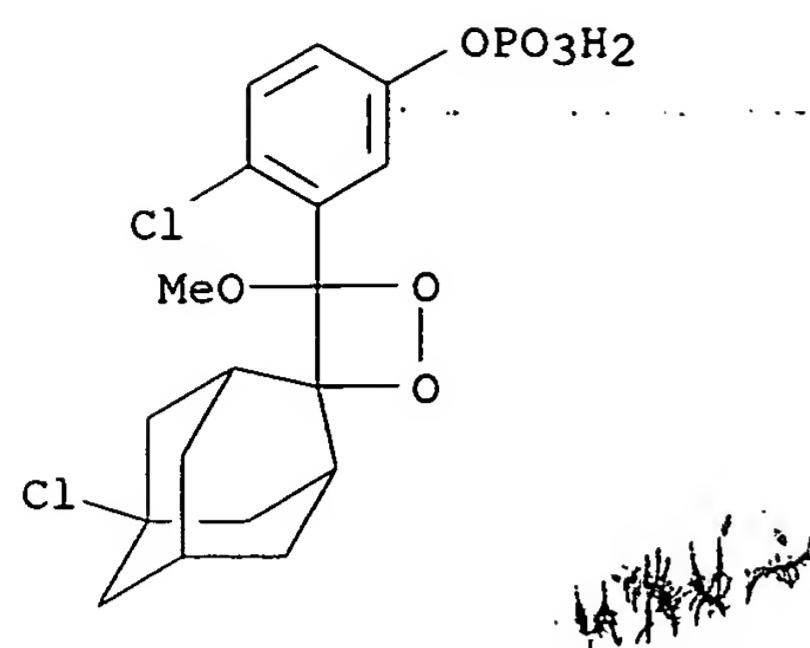
CN Phenol, 3-(5'-chloro-4-methoxyspiro[1,2-dioxetane-3,2'-tricyclo[3.3.1.13,7]decyl]-4-yl)-, dihydrogen phosphate, disodium salt (9CI) (CA INDEX NAME)



●2 Na

RN 443643-96-7 HCPLUS

CN Phenol, 4-chloro-3-(5'-chloro-4-methoxyspiro[1,2-dioxetane-3,2'-tricyclo[3.3.1.13,7]decyl]-4-yl)-, dihydrogen phosphate, disodium salt (9CI) (CA INDEX NAME)



●2 Na